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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,286

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Arno Drechsel

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EXAMINER

JONAITIS, JUSTIN M

ART UNIT

PAPER NUMBER

4159

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,286	Applicant(s) DRECHSEL, ARNO	
	Examiner JUSTIN JONAITIS	Art Unit 4159	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 2, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/12/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the Orifice (10) being designed to change the pressure, the means for closing orifice (10), valve, and control unit (claims 3, 14, & 15) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 4159

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 14, 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent #6,279,598 to Boticki et al.

4. In Re claim 1, Boticki et al. discloses a vacuum generating device (Venturi/Educator (10)), The device comprising:

a. a **duct** (Venturi Tube (51)) extending along a **longitudinal axis** (Axis (53)) for the passage of a main pressurized fluid, the longitudinal duct having an **inlet portion** (air gap (103)), an **outlet portion** (outlet port (43)) and a **restricted portion** (Flow Area (A2)) located there between and adapted to generate a vacuum by Venturi effect;

b. a **first radial conduit** (Input port (149))) in fluid communication with the restricted portion;

c. A **second radial conduit** (Input Port (147)), capable of being in fluid communication with the restricted portion and with the outside;

d. The first radial conduit has a **connecting port** (snap fittings)[column 13, lines 25-26] for connecting with one or more **external actuator members** (Valves (231), (233), etc), a **central chamber** (channels (141) & (143)) being provided to put the first and second radial conduits in fluid communication with each other and with the restricted portion.

5. In re claim 2, Boticki et al. discloses the invention as described above including, the second radial conduit having an **orifice** (Interior of port) which is designed to change the

Art Unit: 4159

pressure in the first and second radial duct and also the flow conditions in said outlet portion (Inherently occurs by adding a different fluid with different pressure conditions and properties).

6. In re claim 3, Boticki et al. discloses the invention as described above including, the orifice is capable of being in fluid communication with the outside environment at atmospheric pressure.

7. In re claim 4, Boticki et al. discloses the invention as described above including, The inlet portion is formed within a **main body** (Inlet End (35)), and the outlet portion is formed within a **tubular member** (outlet portion (37)).

8. In re claim 5, Boticki et al. discloses the invention as described above including, inner diameter of the restricted portion is smaller than the inside diameters of the inlet portion and the outlet portion, the main body and said tubular member are connected with each other so that the inlet, outlet, and restricted portions are aligned along the longitudinal axis.

9. In re claim 14, Boticki et al. discloses the invention as described above including, a **means for closing** (Valve (231)) the orifice of said second radial conduit, which is adapted to change the size of the orifice and/or to selectively close it off.

10. In re claim 16, Boticki et al. discloses the invention as described above including, **attachment means** (snap fitting connections) for securing a **connecting line** (tube (211)) to the one or more actuator members, said attachment means being positioned at said connecting port of said first radial conduit.

11. In re claim 17, Boticki et al. discloses the invention as described above including, further comprising a **plurality of radial conduits** (Input Ports (147) and (149))) in fluid communication with the restricted portion and with the outside, each radial conduit of said plurality being substantially like said first radial conduit and angularly staggered (180 degrees) with respect to it. Furthermore on column 7, lines 16-21 Boticki et al. discloses that it is possible to mix more than 2 using multiple channels. Also see column 14, lines 5-7/

12. In re claim 18, Boticki et al. discloses the invention as described above including, each radial conduit has a respective **connecting port** (Snap fitting) for transmitting said negative pressure to a plurality of **external actuator members** (Valves (233) & (231)), the pressure in each of the radial conduits being controllable by a respective valve or appropriate adjustment means.

13. In re claim 19, Boticki et al. discloses the invention as described above including, the first and the second radial conduit have a **suction port** (Interiors of Input ports (147) & (149)) for the passage of one or more secondary fluids which are designed to be mixed with the main fluid at the restricted portion.

Art Unit: 4159

14. In re claim 20, Boticki et al. discloses the invention as described above including, connecting each **actuator member** (valves (231) & (239)) by a **respective connecting line** (See Tubes/Lines in Figure 1).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

17. Claims 6-13 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #6,279,598 to Boticki et al. in view of US Patent #5,765,758 to Chu.

18. In re claim 6, Boticki et al. discloses the claimed invention except for the central body having a hollow seat which is adapted to house a connecting portion of the tubular member. Chu teaches that it is known in the art to provide a **hollow seat** (hollow connector (73)) in the **central body** (Socket Connector (20)), which is adapted to house a connecting portion of the **tubular member** (Cylinder socket(70)). It would have been obvious to one having ordinary skill

Art Unit: 4159

in the art at the time the invention was made to change the connection on the central body from an external thread to an internal thread in order to secure the two components together.

19. In re claim 7, Boticki et al. in view of Chu disclose the claimed invention above including the connecting portion of the tubular member having external threads for engagement with internal threads on the hollow housing of the main body.

20. In re claim 8, Boticki et al. in view of Chu disclose the claimed invention above except for a sealing ring between the main body and the tubular member, which is positioned at a peripheral edge of the hollow seat. IT would have been obvious to one having ordinary skill in the art at the time the invention was made to include an o-ring between the two members since it was known in the art that including an o-ring (sealing members) in a connection point makes a fluid tight seal. Furthermore Boticki et al. discloses using o-rings for sealing connections [column 13, lines 23-26].

21. In re claim 9, Boticki et al. discloses the first and second radial conduits being formed within the main body.

22. In re claim 10, Boticki et al. discloses the first and second radial conduits are extended along a common geometrical plane, which is orthogonal to the longitudinal axis.

Art Unit: 4159

23. In re claim 11, Boticki et al. discloses the first and second radial conduits are disposed along a common transverse axis, on opposite sides of the longitudinal axis.

24. In re claim 12, Boticki et al. discloses the longitudinal end of the connecting portion positioned at a relatively small axial distance from the restricted portion to receive the main pressurized fluid.

25. In re claim 13, Boticki et al. discloses the central chamber being an annular space between the longitudinal end of the connecting portion of the tubular member and the bottom surface of the seat of the main body.

26. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #6,279,598 to Boticki et al. in view of US Patent #4,224,940

27. Boticki et al. discloses the claimed invention except for the valve being electrically controlled by a control unit. Monnier teaches that it is known in the art to use an **electronically controlled** (electrical control circuit (17)) **valve** (115) in a Venturi system (Venturi device (31)) in order to maintain the flow in the valve. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have electronically control the valves of Boticki et al. in order to maintain the correct flow conditions.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent #3,633,829 to Adams discloses a sprayer which uses Venturies and

Art Unit: 4159

various valves. US Patent #3,826,255 to Havstad et al discloses another application of a Venturi with various connection ports. US Patent #4,224,904 to Clerk shows a Venturi with various connections with various fluid inlets and valves. US Patent #4,708,829 to Byléhn et al. discloses a Venturi with various inputs and outputs. US Patent #5,048,454 to Berntsson discloses another use of a Venturi with many of the same design features. US Patent #5,673,725 to Russell et al. discloses another Venturi with different connection means. US Patent #6,240,983 to Beldham et al. discloses a Venturi with different connection means. US Patent #6,386,293 to Bartlett discloses another Venturi for use with fluids with various connection means. US Patent #6,412,708 to Bohringer discloses a Venturi with a different routing of the central chamber. US Patent #6,682,313 to Sulmone discloses a Venturi used in a spraying application. US Patent #6,786,286 to Bartlett discloses a Venturi with a variety of connection ports. US Patent #7,117,788 to Blaney et al. discloses a Venturi with another variation of the central chamber. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN JONAITIS whose telephone number is (571)270-5150. The examiner can normally be reached on Monday - Friday 7:30am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Nguyen can be reached on (571)272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4159

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJ

/George Nguyen/

Supervisory Patent Examiner, Art Unit 4159